

## *Special Talk by Prof. Simon M. Sze*

“Nanoelectronic Technology: Challenges in the 21<sup>st</sup> Century”

September 23, 17:40 – 18:40

Convention Hall 300 (3F)

Admission: Free

We also would like to invite you to a special talk by Prof. Simon M. Sze, as the 40<sup>th</sup> anniversary of SSDM. Prof. Sze received his B. S. degree from the National Taiwan University, M. S. from the University of Washington, and Ph. D. from Stanford University, all in Electrical Engineering. Dr. Sze was with Bell Telephone Laboratories from 1963 to 1989 as a member of the Technical Staff. He joined the National Chiao Tung University (NCTU) from 1990 to 2006 as a Distinguished Professor. At present, he is a Consulting Professor of Stanford University and an Honorary Chair Professor of NCTU. His book “Physics of Semiconductor Devices” (Wiley, 1962; 2<sup>nd</sup> Ed, 1981; 3<sup>rd</sup> Ed, 2007) is one of the most cited works in contemporary engineering and applied science publications (over 16,000 citations according to ISI Press).

As the microelectronics moves to the nanoelectronics, we face many major challenges, including (1) the difficulty in growing super-large-diameter wafers, (2) the limitation of lithographic systems, (3) the complexity in deca-nano device structures, (4) the parasities in multilevel interconnection, and (5) the high capital cost. In this special talk, Prof. Sze will present a few innovative approaches to overcome some of these challenges.